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BULGARIA'S BLACK SEA COAST

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At an early morning hour, the airplane, bathed in the sunrays, rose proudly over the airfield of Stalin, our eyes gazed for the last time on the endless stretch of Bulgaria's Black Sea. Its lightly rippled surface shone brightly and beautifully reflecting small groups of early feathery clouds which accudded freely across the blue skies. We were then overcome with quiet nostalgia for this charming corner of Bulgaria which we had barely got to know before it was time to leave.

The Bulgarian Black Sea coast is a relatively insufficiently studied and described region of Bulgaria. All those who have had the opportunity of visiting it have admired its many beautiful spots but those who have contributed something to the study of these can be counted on the fingers of one hand. There is, however, much to be studied here. The geography of the Black Sea coast is so rich and varied that many diverse things can be seen within a short distance.

Morphologically, the Black Sea coast shows great diversity of formations, resulting from the simultaneous action of the inner and exterior forces of the earth.

In this rich morphological variety, the frequency and development of landslides strikes the eye. They are particularly interesting near Balchik. Large earth blocks have broken away from the plateau as dry land and have slid down the steep slope toward the sea. Thus the shore has assumed a terrace like character. The incidence of landslides can be explained by the nature of the earth layers, and the character and succession of their formation. The impermeable marl layers, the particles of which swell and soften under abundant rainfall, are visible. In this state, the marl layers become a slippery surface, and the upper layers of water-permeable limestones and sandstones, heavy with absorbed water, become unstable, and lose their balance. The second condition which facilitates the formation of landslides is the existence of an incline. Furthermore this entire accumulation of layers is inclined.

The origins of landslides along Bulgaria's Black Sea coast, under the above circumstances, are quite varied. Some were caused by the undermining of the shore by the action of the sea waves, while others were caused by other denudation processes.

As to the age of the landslides, we divide them into old and young, the first probably being of the Quaternary age. They are covered with trees, bushes, and vines. The younger are well covered with grass, but in places the grass cover has been torn away -- a sign of continue landslides. The old landslides, which are numerous and large in size are the most common in the Stalin region. The picture is different in the Burgas and Tsarevo regions. Here young and contemporary landslides are predominant. They are much larger in size -- in the vicinity of several hundred sq m. They are however considerably more shallow, for the clay is almost at the surface.

Landslides have a negative economic effect. They do because hundreds of decarees of arable land remain unfit for cultivation, and houses and other building built on them are in serious danger of destruction. All this makes it necessary to organize a complex struggle against landslides by means of drainage or afforestation. A second means of combating landslides would be particularly effective in the Burgas, Michurin, and Pomorie regions, where it could be achieved by planting vines, almond and fig trees, for which the soil and climatic conditions are particularly favorable. Thus the usefulness of the land will be doubled.

The mouths of the rivers joining the Black Sea make a particularly beautiful picture. The dense vegetation which externally resembles that of the tropics, the beautiful water flowers perched on the quiet surface of the water, and the wonderful chorus of birds make these places very attractive and desirable to all. And anyone who has once visited the Longosa region of the Kamchiya and Ropotamo rivers, will always longingly remember the delicate beauty of the water lilies, the enchanting songs of the winged hosts, and the virgin charm of the centuries old forests and shrubs.

Morphologically, the mouths of these 2 rivers are estuaries, i.e., the mouths have been submerged as a result of tectonic sinkings. The morphological life of such a sunken river mouth is quite interesting. In the course of time it is bounded by a sandy stretch which cuts it off from the sea. These sandy stretches, which we note along the mouths of almost all Bulgarian rivers emptying into the Black Sea, have taken place as a result of the action and counteraction between the surface sea current parallel to the shore running from north to south and called the Dyavolsko current, and the quiet calm waters at the mouths, located in small bays. In the course of time, slowly but uninterruptedly, the sandy stretch increases in size and completely cuts off the river mouth, forming a lake. The Stalin, Burgas, and almost all the other Black Sea lakes are lakes of this kind. The respective sandy stretches which separate the Stalin and Mandrensko lakes from the sea have been divided by canals, the cutting of which has caused a sinking in the level of the lakes and a lessening of their saltiness. This has increased the economic importance of the 2 lakes and freed a considerable amount of fertile land.

Each one of the rivers which run into the Black Sea has its charms. However the most beautiful and most frequently visited are still the Kamchiya and Ropotamo rivers. When one rows up the river in a little boat and the sea disappears from sight after the first bend, one feels the cool breath of the shadowy places which are dark because no sunlight ever penetrates here. The roof of climbing vines gradually becomes thicker and lower, and the whole atmosphere more and more mysterious. The white carpet of water lilies allows the boat to proceed only with difficulty.

Despite their beauty, the estuaries, particularly that of the Kamchiya River, are regions subject to frequent and serious floods. These floods are destructive to agriculture, resulting from the numerous meanderings of the river, which, along with the dense vegetation prevent normal river flow. In the past almost nothing was done to prevent floods, but measures are now envisaged which will permit the permanent liquidation of the dangers resulting from these natural phenomena. At the same time the estuary of the Kamchiya River will be straightened to permit its navigation by small sea vessels. All this will increase the economic importance of this region and will increase the welfare of its population.

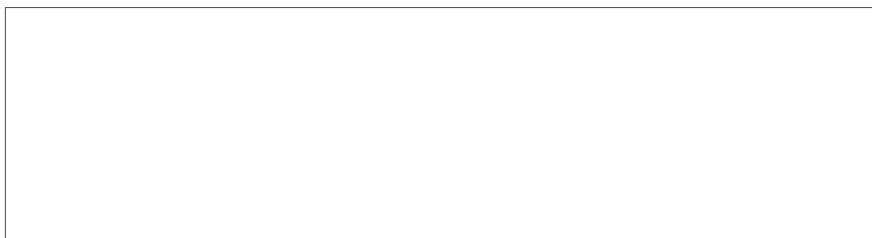


On the whole, the Bulgarian Black Sea coast is not very irregular, in spite of the fact that it presents a rather complicated zigzag outline. Excepting Burgas and Stalin bays, there are no large, adequate bays along it, for it does not have long capes. Only the Kaliakra, Yemine, and Maslen capes disturb the monotony of the shore. The first is a monolithic rock, jutting slightly into the sea, while the second is rather irregular and wider.

Typical topographic forms along the coast are eroded surfaces, and the related cliffs and reefs, which have remained here and there along Bulgarian's Black Sea coast. In the region of Stalin bay we can differentiate 3 eroded surfaces; there is only one such surface inclined toward the sea, along the Balkan Mountains part of the shore, above the present cliff, which is the highest of all. On the south, near Michurin, we see 2 other surfaces whose height is superior to that of those near Stalin bay. This means that the epeirogenic lifting of the Bulgarian Black Sea coast has been strictly differentiated in time and in space.

Particularly striking also is the clearly expressed similarity between the old and new shore lines, i.e., the present day elevated shore line corresponds to a former elevated shore line, and vice versa. This shows derivation in the formation of the shore line.

Sliding smoothly through the white clouds, the glittering plane gracefully pursues its course. We turn our heads and peer through the small square window, seeking a last glimpse of the quiet green waters on which the early but already scorching rays of the August sun play.



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